

WHAT IS CLAIMED IS:

1. An ink-jet recording apparatus comprising:
 - a medium conveyance mechanism that conveys a record medium;
 - 5 an ink-jet head that has a nozzle face where a plurality of nozzles are arranged, for ejecting ink through the nozzles onto the record medium conveyed by the medium conveyance mechanism; and
 - a maintenance unit,
 - 10 the maintenance unit comprising:
 - an ink receiving member in which a plurality of protrusions are arranged, the protrusions being able to be brought into contact with ink adhering to the nozzle face, for receiving the ink in a space between the protrusions;
 - 15 a first wiping member that is able to be brought into contact with the nozzle face to wipe up ink adhering to the nozzle face; and
 - a driving mechanism that moves the maintenance unit so that the ink receiving member receives ink adhering to the nozzle
 - 20 face and then the first wiping member wipes up ink adhering to the nozzle face.

2. The ink-jet recording apparatus according to claim 1, wherein the maintenance unit further comprises a purge cap
- 25 that sucks ink out of each of the nozzles; and

the driving mechanism moves the maintenance unit so that the purge cap sucks ink out of the nozzles, and then the ink receiving member receives ink adhering to the nozzle face.

5 3. The ink-jet recording apparatus according to claim 2, wherein the medium conveyance mechanism can shift between a conveyance position and a non-conveyance position spaced apart from the nozzle face, and

the driving mechanism moves the maintenance unit so that
10 the purge cap confronts the nozzle face when the medium conveyance mechanism is in the non-conveyance position.

4. The ink-jet recording apparatus according to claim 1, wherein the driving mechanism moves the maintenance unit
15 along a longitudinal direction of the ink-jet head.

5. The ink-jet recording apparatus according to claim 1, wherein the protrusions of the ink receiving member are thin plates arranged parallel to each other, each thin plate being
20 along a direction perpendicular to a movement path of the maintenance unit.

6. The ink-jet recording apparatus according to claim 1, wherein the first wiping member is made of a porous material
25 capable of receiving ink.

7. The ink-jet recording apparatus according to claim 1, wherein the first wiping member has a rotational axis parallel to the nozzle face and the first wiping member is rotated with being in contact with the nozzle face attendant upon movement of the maintenance unit.

8. The ink-jet recording apparatus according to claim 1, wherein the maintenance unit further comprises a purge cap that sucks ink out of each of the nozzles; and the first wiping member is arranged on a side of the ink receiving member opposite to the purge cap.

9. The ink-jet recording apparatus according to claim 1, wherein the maintenance unit further comprises a second wiping member that is able to be brought into contact with the nozzle face to wipe up ink adhering to the nozzle face, and the driving mechanism moves the maintenance unit so that the ink receiving member receives ink adhering to the nozzle face, the first wiping member wipes up ink adhering to the nozzle face, and then the second wiping member wipes up ink adhering to the nozzle face.

10. The ink-jet recording apparatus according to claim 9, wherein the second wiping member is a blade that scrapes

ink off.

11. The ink-jet recording apparatus according to claim 10, wherein the blade is made of a flexible material.

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12. The ink-jet recording apparatus according to claim 9, wherein the maintenance unit further comprises a purge cap that sucks ink out of each of the nozzles; and

the first wiping member is arranged on a side of the ink receiving member opposite to the purge cap, and

the second wiping member is arranged on a side of the first wiping member opposite to the ink receiving member.

13. A maintenance method of an ink-jet head, the method comprising:

an ink receiving step for bringing ink adhering to a nozzle face on the ink-jet head where a plurality of nozzles are arranged into contact with protrusions arranged on an ink receiving member so as to receive the ink in a space between the protrusions;

20 and

a first wiping step for bringing a first wiping member into contact with the nozzle face so as to wipe up ink adhering to the nozzle face with the first wiping member, after the ink receiving step.

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14. The maintenance method according to claim 13, wherein the first wiping member absorbs therein ink adhering to the nozzle face.

5 15. The maintenance method according to claim 13, further comprising a second wiping step for bringing a second wiping member into contact with the nozzle face so as to wipe up ink adhering to the nozzle face with the second wiping member, the second wiping step being performed after the first wiping step.

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16. The maintenance method according to claim 15, wherein the second wiping member scrapes off ink adhering to the nozzle face.

15 17. The maintenance method according to claim 13, further comprising:

 a cap arrangement step for arranging a purge cap that sucks ink out of each nozzle so that the purge cap confronts the nozzle face; and

20 a purge step for sucking ink out of the nozzles,
 the cap arrangement step and the purge step being performed before the ink receiving step.